

# Challenges of complex femoropopliteal lesions & disease patterns – how to approach & crossing strategies



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Speaker name:

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I have the following potential conflicts of interest to report:

- Consulting
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)
  
- I do not have any potential conflict of interest

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„Complex“ mostly means (severe) calcification

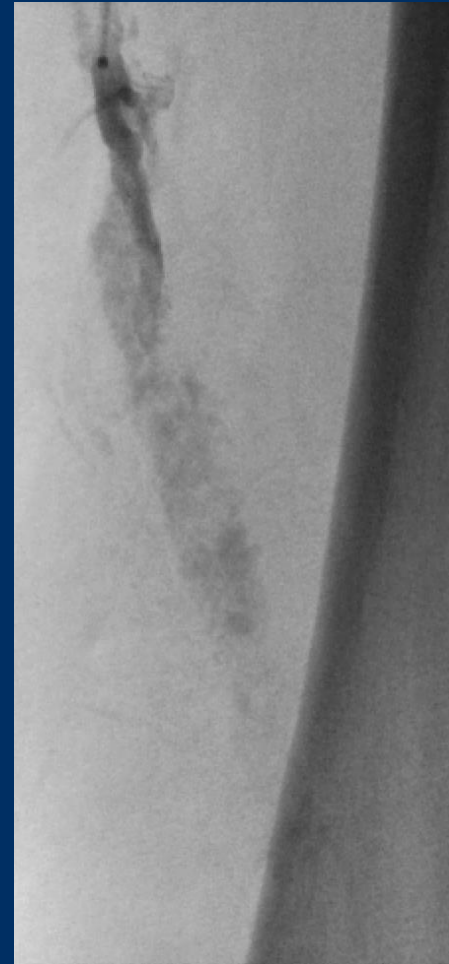
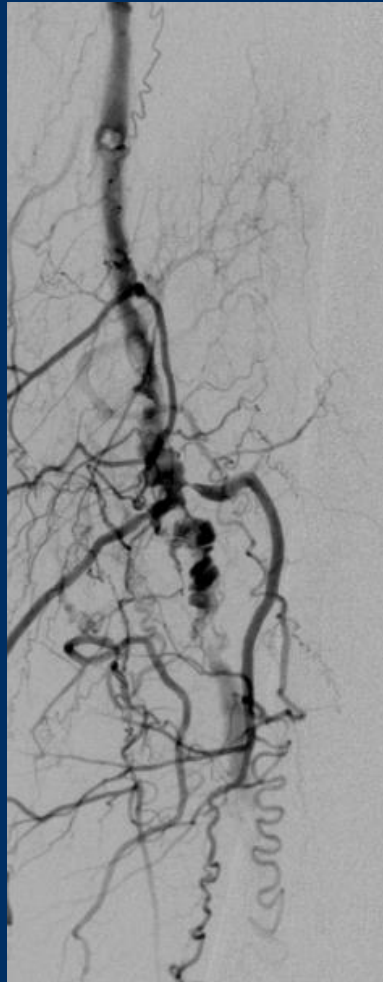
Difficulties of complex cases:

How to pass the guidewire

How to open the vessel appropriately

How to keep it open in the long term

# Initial passage of femoropopliteal CTO's: Subintimal or through calcific plaque?



# Subintimal vs. intraluminal wire passage

Initial and 3-year results after subintimal vs intraluminal approach for long fempop occlusions treated with stents.

Soga Y, et al. J Vasc Surg 2013

	Intraluminal	Subintimal	p
N	651	251	
Success-rate	91 %	90 %	0.71
Periprocedural complications	11 %	13 %	0.34
Procedure-time (minutes)	126 ± 63	98 ± 49	0.003
3-year primary patency	55 %	53 %	0.3
25 % of cases started as intraluminal switched to subintimal			

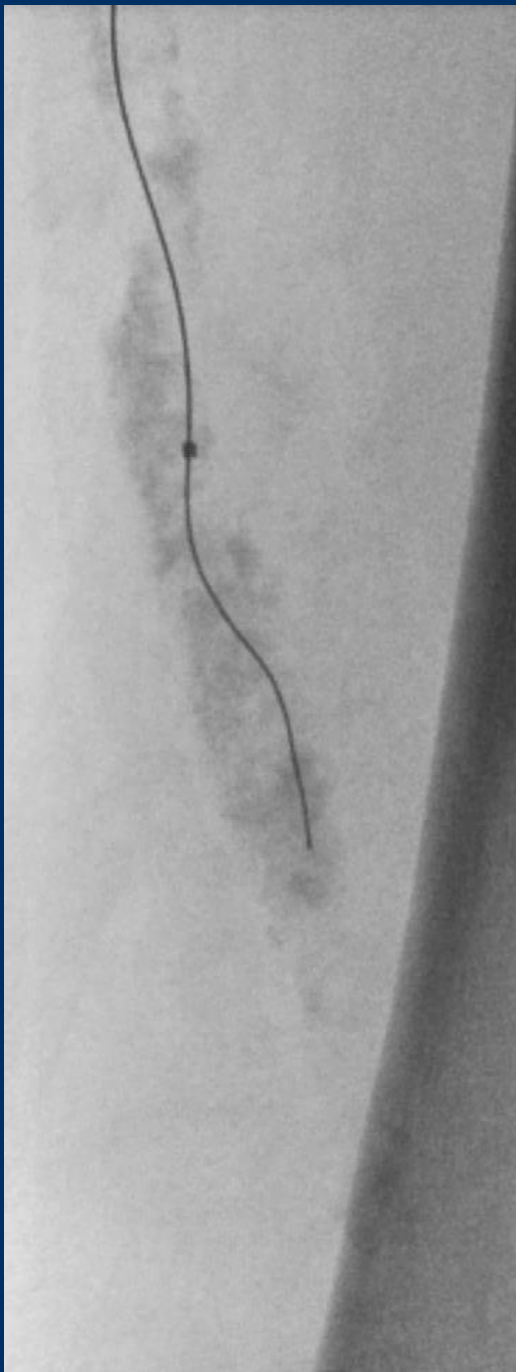
*Conclusions:* Initial result and 3-year patency was similar in both approaches. Given the longer procedure time and high crossover rate, we suggest that a subintimal approach may be preferred in the treatment of long femoralpopliteal occlusions with stenting. (J Vasc Surg 2013;■:1-9.)

# Subintimal vs. intraluminal wire passage

There are arguments for intraluminal:

- Less severe (spiralic) dissection, less recoil with potentially less stenting
- Debulking is possible (Atherectomy, Laser, etc)
- No extension of dissection to P1 by the attempt to reenter the true lumen
- Preservation of side branches/collaterals

Furthermore, after intraluminal recanalization no reentry device is necessary (distal reentry failure in up to 20%)



Intraluminal GW-Passage in Calcium  
to avoid problems with reentering

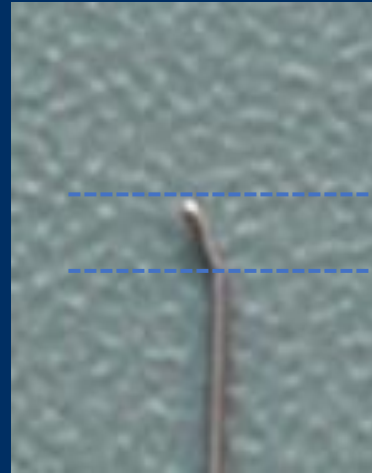
Start with 0.018" hydrophilic coated  
„workhorse“ guidewire  
for intraluminal passage

More drilling than  
pushing the GW



# For more support: high tip-load CTO-Guidewires

Tip-bending:



~ 1mm

Vessel preparation for  
further treatment



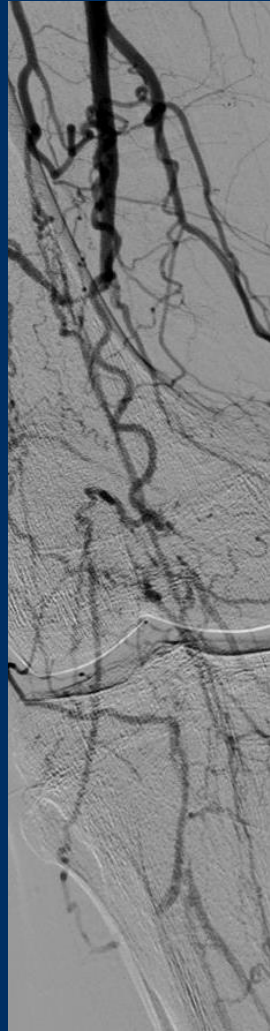
# How do we prepare vessels

- **Debulking devices / Atherectomy devices**
  - Rotational
  - Directional
  - Ablative
  - Physical scoring
- **Plaque modifying devices**
  - Non Compliant POBA
  - Scoring
  - Lithoplasty

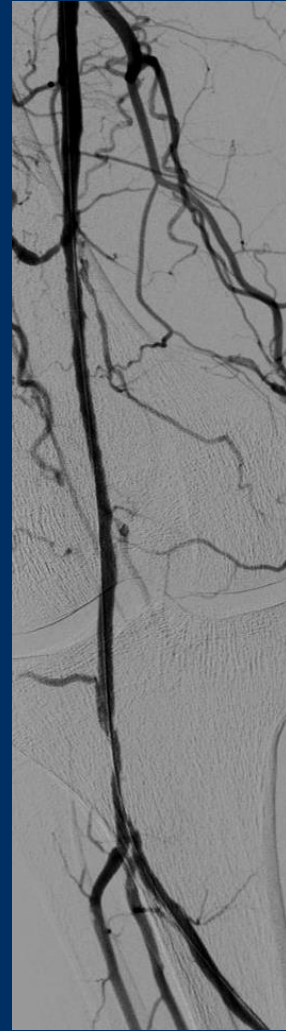
# Goals of vessel preparation prior to DCB or stenting

1. Reduction of mechanical problems like recoil and dissections in order to improve luminal expansion
2. Removal of occluding material for improved vessel wall compliance to reduce unintentional barotrauma due to angioplasty
3. Plaque modification for improved drug uptake
4. Better luminal gain to accommodate stents

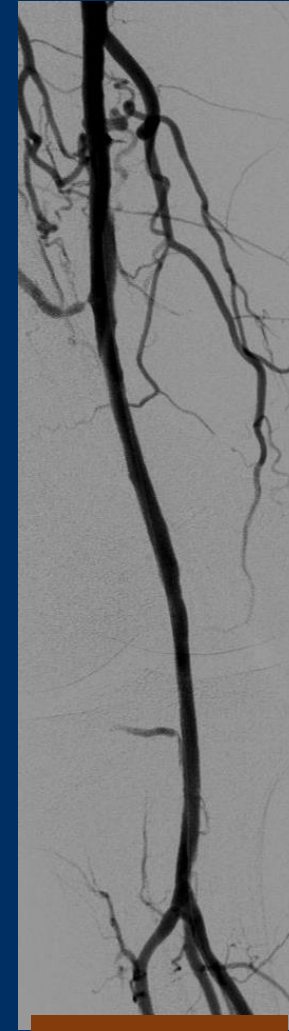
# Atherectomy for chronic occlusions



Clinically chronic Apop-occlusion

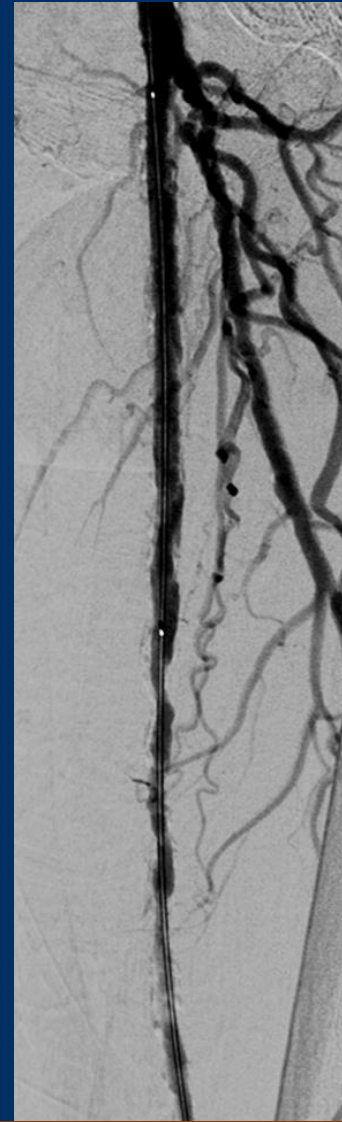
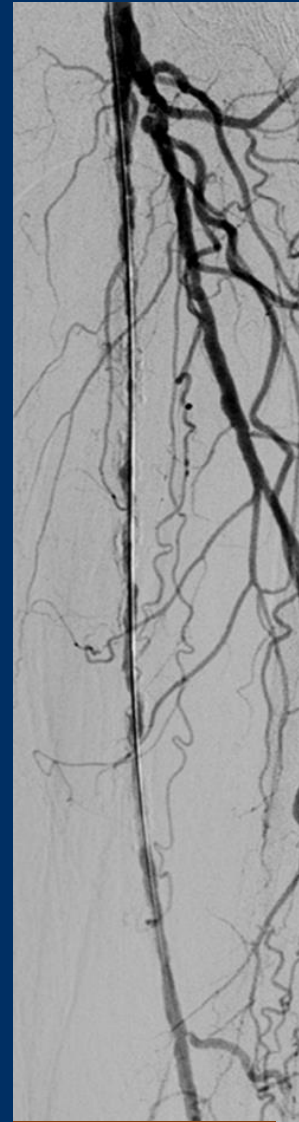
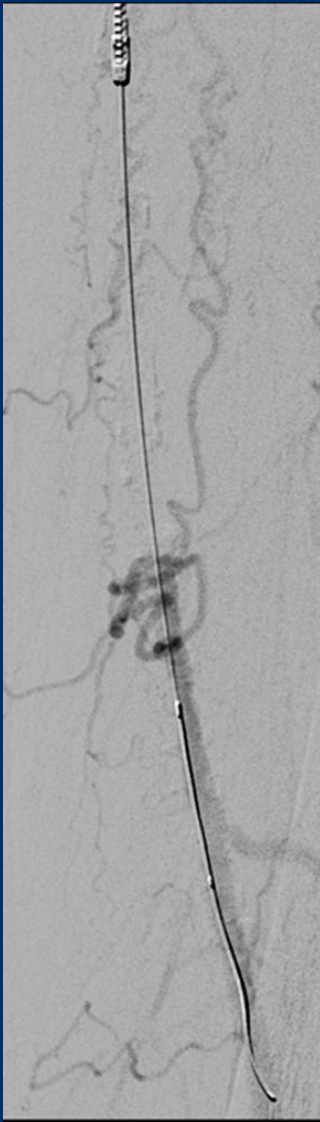
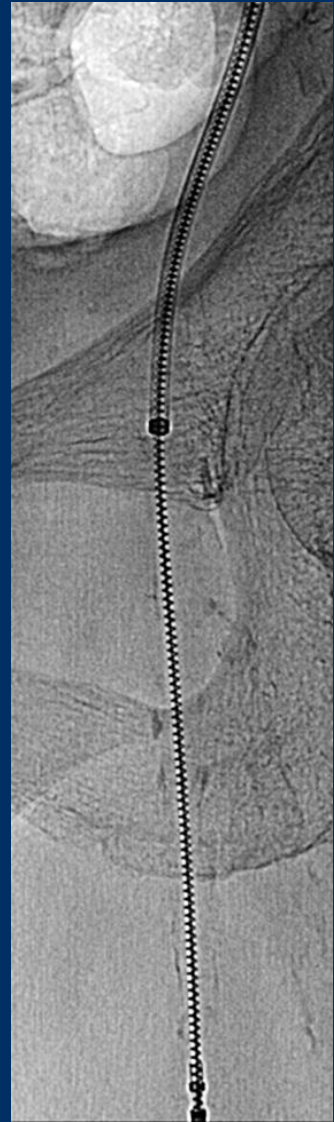


6 Fr



After DCB

# Atherectomy for Chronic SFA-CTO



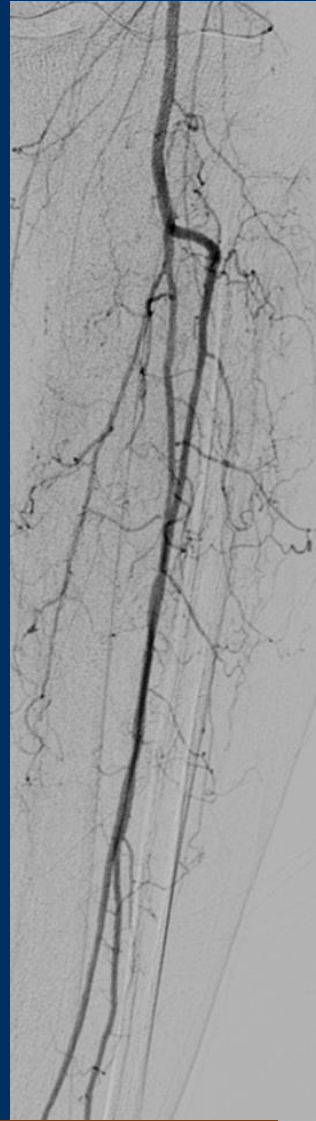
CTO of the left SFA, 8 Fr

First pass

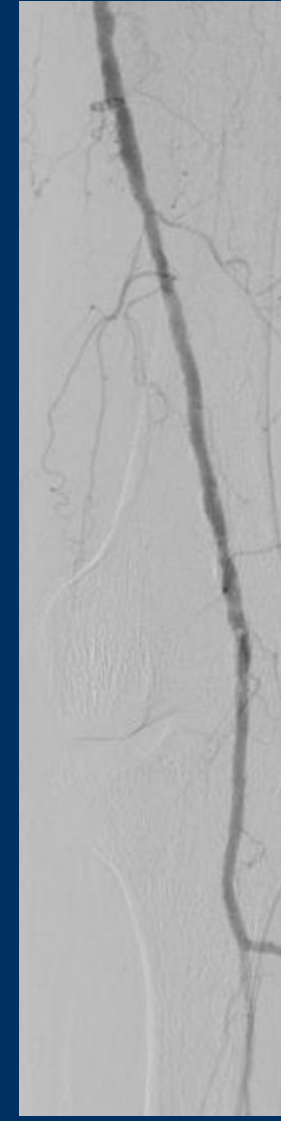
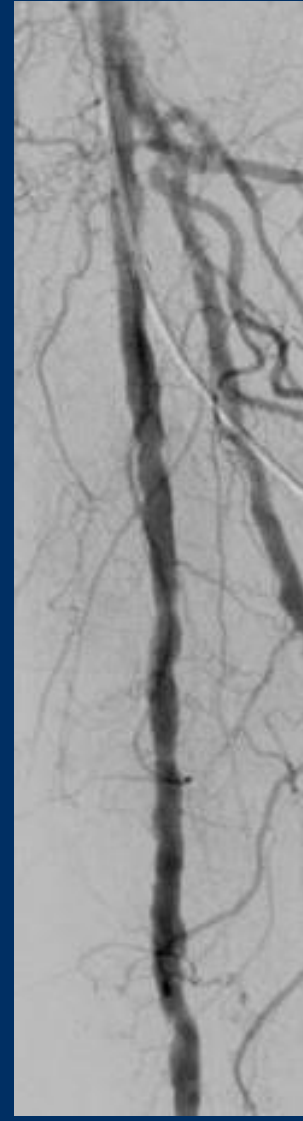
Several passes



# Atherectomy for Chronic SFA-CTO



2 x 5.0/120 mm DCB



12 months FU results

# Summary

- The removal of artery-occluding material before adjunctive therapy (DCB) appears to be a reasonable approach
- An intraluminal guidewire passage is preferable
- An adequate vessel preparation is essential, for all disease patterns
- Different treatment modalities are available and should be used depending on the individual case